

FRENKEL, Ye.B.

ZUBIN, A.M., kand.biolog.nauk; KUZNETSOV, B.A., pref., doktor biolog. nauk; MCSKKOV, A.N., kand.sel'ekokhoz.nauk; PURIM, Ya.A., kand. tekhn.nauk; CHATSKIY, P.I., kand.tekhn.nauk; SERGEYEVA, T.A., kand.tekhn.nauk; BARYKIN, A.M., kand.tekhn.nauk; LOSEVA, N.L., kand.tekhn.nauk [deceased]; RUMYANTSEV, M.Z., starshiy nauchnyy sotrudnik [deceased]; LAPIDUS, L.G., starshiy nauchnyy sotrudnik; FRENKEL', Ye.B., kand.tekhn.nauk; KHCEL'NITSKAYA, Ye.G., mladshiy nauchnyy sotrudnik; KATAYEV, V.P., kand.ekonom.nauk; KLYAGINA, N.I., red.; MARTYNOV, S.F., red.; MINAYEVA, T.M., red.; PLEMYANNIKOV, M.N., red.; KNAKNIN, M.T., tekhn.red.

[Manual on fur and sheep pelt garment manufacture] Spravochnik po mekhovoi i ovchinno-shubnoi promyshlennosti. Vol.2.[Raw materials. Semifinished and final products. Production technology] Syr'e. Polufabrikaty i izdeliia. Tekhnologiya proizvodstva. 1959. 631 p. (MIRA 13:3)

1. Nauchno-issledovatel'skiy institut mekhovoy promyshlennosti (NIIMP) (for Rumyantsev, Lapidus).

(Hides and skins) (Fur--Handbooks, manuals, etc.)

FRENKEL', Ye.B., kand tekhn.nauk; KHMEL'NITSKAYA, Ye.G., mladshiy nauchnyy
sotrudnik; KAS'YANOVA, R.V., technolog

Using a steam-air mixture for moisturizing pelts and semifinished
sections in furrier work. Nauch.-issl.trudy NIIMP no.10:65-75
'60. (MIRA 14:4)

(Fur--Dressing and dyeing)

FRENKEL', Ye.B.; SHAKHET, G.P.; KAZAS, V.M.; KHMEL'NITSKAYA, Ye.G.;
BRUSSER, V.M.; KAS'YANOVA, R.V.

New method of moistening fur skins and cuts in furrier work.
Kozh.-obuv.prom. 5 no.1:28-31 Ja '63. (MIRA 16:2)
(Fur—Dressing and dyeing)

СЕННИН, Я.В., канд. техн. наук; ЕНУЛИЛИНА, В.В., старший научный сотрудник; КАСИЯНОВА, Р.А.

Use of infrared rays for rabbit pelt drying during the tanning of raw skins. Nauch. issl. trudy NINT no.12:39-45 '63.

Radiation-convection method for drying skins, pelts with the use of gas radiators. Ibid.:45-55 (1964 17:11)

FRENKEL', Ye.I., inzh.

Use of the "fluid-bed" method in the textile industry (from
"Textilindustrie", no.22, 1958). Tekst. prom. 19 no.7:84 JI
'59. (MIRA 12:11)

(Textile machinery)

FRENKEL', Ye.I., inzh.

Efficiency of Lurbinators." (from "SVF Fachorgan," no.11, 1958).
Tekst.prom. 20 no.4:88 Ap '60. (MIRA 13:8)
(Dyes and dyeing--Equipment and supplies)
(Vibrators)

FRENKEL', Ye.I.

Modern design of machines for yarn and fabric drying; review
of foreign literature and patents. Tekst.prom. 23
no.1:85-87 Ja '63. (MIRA 16:2)

1. Zamestitel' glavnogo inzhenera Moskovskogo instituta
promyshlennogo proyektirovaniya.
(Drying apparatus--Textile fabrics)

FRENKEL', Ye. I.

Machine for rubber covering. Tekst. prom. 23 no.3:92
Mr '63. (MIRA 16:4)

1. Zamestitel' glavnogo inzhenera Moskovskogo instituta promyshlennogo proyektirovaniya.

(Textile machinery)

FRENKEL, Y. M.

Prevention of water intoxication in adrenalectomized rats by means of desoxycorticosterone acetate, cortin, and adrenaline. E. M. Frenkel. *Bull. Exptl. Biol. Med.* 22, No. 6, 10-13 (1946).—The effect of dosage of preps. of suprarenal cortex and adrenaline on the amt. of eliminated urine was studied, and the applicability of the water intoxication test for assay of these products was examd. Adrenalectomized female rats were given water (by stomach tube) in 5 portions 1 hr. apart (6 g. per 100 g. body wt. in each portion). All adrenalectomized animals died within 11 hrs. with symptoms of water intoxication, with 10.5% of normal amt. of urine elimination. When cortin was injected, however, with 1st injection 1 hr. before water administration and 2nd and 3rd injections between 3rd and 6th water injection, the animals receiving a total of 3 cc. of cortin soln. (aq. soln. made locally; no other quant. data) eliminated urine normally and survived; decrease of dosage to 1.25 cc. led to death within 11 hrs. Similar expts. with injection of com. oil prepn. of desoxycorticosterone acetate (Schering) gave almost normal urine function at 4 mg. dosage, but at 3 mg. the urine level was but 71%, and at 2 mg. 24% of normal. Use of adrenaline (33% per cc.), 0.5 cc. injected simultaneously with 1st dose of water and another 0.5 cc. simultaneously with 4th water injection gave substantial prevention of water intoxication (80% elimination over 23-hr. period). Simultaneous administration of adrenaline and desoxycorticosterone acetate gave the same results as adrenaline alone. On this basis the water-intoxication alleviation may be used as an assay of potency of cortical preps. G. M. Kosolapoff

FRENKEL, E.M.

Application of organo-mineral mixtures after deepening the arable horizon. E. M. Frenkel (State School of Agriculture, Moscow). Doklady Vsesoyuznogo Nauchno-Issledovatskogo Instituta V.I. Lenina 21, No. 6, 32-33 (1958). - Oats, soy beans and the winter wheat were grown on a 5 ha plot which was plowed to a depth of 20 cm. A mixt. of 10 tons of organic matter and 1 kg of superphosphate was applied. Data were obtained relating to the characteristics of the soil such as: electrolytic acidity, sum of the adsorbed base, degree of saturation with bases, amt. of humus, the soil moisture, dynamics of the nitrates, the available P_2O_5 , the microbial activity, the root system distribution in it, and a series of other factors above the ground. Data showed that nitrates, P_2O_5 and more available to the plants in the deeply plowed plots. Deep plowing had a beneficial effect on the root system of oats and on microflora. Data show that it increased the activity of biol. processes, improved the ventilation, and markedly changed the aggregation of the soil particles. Successful deep plowing was found to depend on the intensification of the biological process in the soil. Application of organo-mineral fertilizers insured this activity according to data on the amount of microorganisms. A field data confirmed effectiveness of this method. (M. D. ...)

FRENKEL', Yo.M., aspirant.

Experience of deepening the plow layer of gray forest-steppe soils
in the area south of Moscow. Dokl. TSKhA no.28:96-100 '57.
(Moscow Province--Soils) (MIRA 11:4)

FRENKEL', Ye. M.: Master Agric Sci (diss) -- "Increasing the depth of plowing on gray forest-steppe soils as one element in their cultivation". Moscow, 1958. 20 pp (Moscow Order of Lenin Agric Acad im K. A. Timiryazev), 110 copies (KL, No 6, 1959, 139)

FRENKEL', Ye.M., zaachnyy aspirant.

Microbiological activity and biogenesis of gray forest-steppe
soils in relation to the deepening of the plow layer [with summary
in English]. Izv. TSKhA no.6:117-130 '58. (MIRA 12:1)
(Soil micro-organisms) (Forest soils)

FRENKEL, Yu.

USSR/Electronics - Resistive-capacitance filters

Card 1/1 Pub. 89 - 23/29

Authors : 'Frenkel', Yu.

Title : RC-filters

Periodical : Radio 9, 51-53, Sep 1954

Abstract : Properties and advantages of RC (Resistive-Capacitance) in comparison with inductance-capacitance filters are described. Formulas for computation of data and plotting the characteristic curves of the RC filters are included. Circuit diagrams; table; graphs.

Institution : ...

Submitted : ...

data of the instrument with a relay, a relay and electrical chronograph, and with an electrical chronograph. The instrument is suitable for measurements of mean current. The instrument is suitable for measurements of mean current. The instrument is suitable for measurements of mean current.

Courtesy, Referativnyi Zhurnal, Ser. A, Register, USSR, Translation, courtesy Ministry of Supply, England

FRANGL, Y. E., and MIUGLAYLOV, A. N.

"Powdered polyamides as reinforcing agents for plastics," a paper
presented at the 9th Congress on the Chemistry and Physics of High Polymers,
20 Jan-2 Feb 57, Moscow, Leather Research Inst.

B-3,084,305

RUMANIA / Organic Chemistry. Synthesis.

G-2

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8358.

Author : Tanasoscu, I., Frankel, Z.

Inst : Not given.

Title : On Acridones. XV. Condensation of 2,4-Benzaldehyde with Chloro- and Bromobenzene.

Orig Pub: Studii si cercetari de chim., 1956, 4, No 3-4, 227-234.

Abstract: By condensation of 2,4-dinitro-benzaldehyde (I) with chlorobenzene (II) and with bromobenzene were prepared 3-nitro-6-chlor- (III) and 3-nitro-6-brom-N-oxo-C-hydroxy-acridino (IV), with concurrent formation of 3-nitro-p-chloro- (V) and 3-nitro-p-bromo-phenyl-anthranil (VI). Reduction of III and V with Zn-dust gave, respectively, 3-amino-6-chloracridono (VII) and 2,4-diamido-

Card 1/4

ROMANIA / Organic Chemistry. Synthesis.

G-2

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8358.

Abstract: 4-chlorobenzophenone (VIII). Isomerization of V yielded 3-nitro-6-chloracridone (IX). To a solution of 5 g I in 50 ml II were added 25 ml concentrated H_2SO_4 and after 24 hours the bottom layer was washed 2-3 times with 40-50 ml II, each time, and was then poured in 2 liters of water, filtered, the residue was dried, and by boiling twice with C_6H_6 there were isolated 3.5 g of III, while evaporation of C_6H_6 yielded 3.2 g of crude V, MP 215° (from ethyl acetate).

Card 2/4

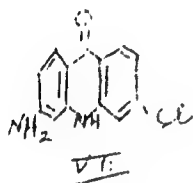
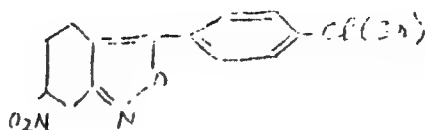
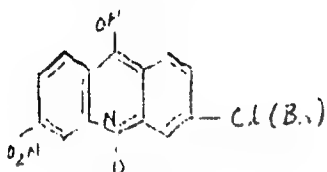
92

RUMANIA / Organic Chemistry. Synthesis.

C-2

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8358.

Abstract:



Card 3/4

RUMINIA / Organic Chemistry. Synthesis.

G-2

- Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8358.

Abstract: IV was prepared analogously to III; VI the same as V. Cooling of filtrate obtained from a mixture of 0.5 g II / 50 ml water / 50 ml alcohol / 7.5 g Zn-dust / small crystal of CaCl_2 , which had been boiled for 1.5 hours, yielded VII, MP 360° (from aqueous alcohol). Analogously was prepared the VIII, MP 198° ; IX was obtained on adding NaNO_2 to a solution of V in concentrated H_2SO_4 . On boiling (2 hours) III in nitrobenzene, after filtering-off and precipitation with C_6H_6 , crude IX was purified with 95% alcohol, glacial CH_3COOH , and the C_6H_6 . -- A. Marin.

Card 4/4

SILBERG, A.; HAMBURG, Erica; FRENKEL, Z.; CORMOS, L.

Contributions to the study of thiazoles. Pt. 7. Rev chimie Roum 9
no.3:215-228 Mr '64.

1. Laboratory of Organic Chemistry, Faculty of Chemistry, Babes-
Bolyai University, Cluj.

SIIBERG, Alexandru; FRENKEL, Zoltan; CORMOS, Liviu

Contributions to the study of thiazoles. Pt. 3. Studia Univ B-B
S. Chem 7 no.2:23-30 '62.

STIEBER, Alexandru; FRENKEL, Iolita

Contributions to the elucidation of the Lehnstedt-Tanasescu
reaction mechanism, Studia Univ B-B S. Chem 7 no.2:53-57 '62.

SILBERG, Alexandru; FRIENKEL, Zoltan; CORMOS, Liviu

Contributions to the study of thiazoles. Pt.4. Studia Univ.
B-B S Chem 8 no.1:273-281 '63

1. "Babes- Bolyai" University, Cluj

Frankel', Z.G.

USSR/Medicine - Education, Medical
Medicine - Public Health Aug/Sep 1947

"New Progress in the Establishment of Higher Medical
Schools in Soviet Russia," Z. G. Frankel', 3 pp

"Sovetskoye Zdravookhraneniye" No 6

The Second Leningrad Medical Institute is the first
Sanitation-Hygienic Medical Institute in the USSR. In
honor of the 30th anniversary of the Revolution this
institute began a new school of higher medical leadra-
ing to train new scientists to fill posts of Public
Health Officials in the Soviet Union. Article gives
very general description of the subjects to be

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USSR/Medicine - Education, Medical Aug/Sep 1947
Medicine - Public Health (Contd)

studied by the students in this new school of higher
medical knowledge.

2254

FRENKEL' Z.G.O.

42610. Soblyudenii Sanitarno-gigiyenicheskikh Normativov Bol(nichnogo Stroitel'stva.
Vracheb. Delo, 1948, No.11 Stb. 1005-08. Sm. Takzhe No. 42849

FRENKEL, Z.G.

25195. FRENKEL, Z. G. Zadachi Gigieny i Sanitarnogo Rukoustroystva Pri Vossanovlenii i Razvitii Leningrada v 4-Y Stalinskoy Pyatiletke. Trudy Leningr. San.-Gigien, Med. In-ta, T-1, 1949, S.5-32

SO: Letopis' No. 33, 1949

FRENKEL', Z. G.

37546. Zadachi Kommunalnoy Gигiyny I Sanitarnogo Blagoustroystva Pri Vosstanovlenii, Razviti i Stroitel'stve Naselennykh Mest V Chetvertoy Pyatiletke. V SB:XII Vsesoyuz. S"yezd Gигiyenistov, Epidemiologov, Mikrobiologov I Infektsionistov. T. I. M., 1949 c. 49-52

SO: Letop'is Zhurnal'nykh Statey, Vol. 37, 149

FRENKEL', Z. G.

PA 48/49T60

USSR/Medicine - Hygiene and Sanitation, Teaching
Medicine - Social Hygiene Mar/Apr 49

"Theory of the Soviet Health Program," Prof
Z. G. Frenkel', Hon Worker of Sci, Leningrad,
24 pp

"Sov Zdravookhran" No 2

Favors Prof G. A. Batkis' article. Agrees with
Batkis that study of social hygiene should be
made an independent scientific field of study
and should be taught in medical 'VUZ' (Higher
Medical Schools). This is necessary in "molding

48/49T60

USSR/Medicine - Hygiene and Sanitation, Teaching (Contd)
Mar/Apr 49

the Soviet physician's mentality." Hopes
Batkis' appeal will attract attention.

48/49T60

FRENKEL', Z. G., Prof.

PA 170T65

USSR/Medicine - Societies, Medical
Hygiene and Sanitation

Jun 50

"Activity of the Leningrad Branch of the All-
Union Society of Hygienists in 1948 - 1949 and
the Problems to be Met in 1950-1951," Prof Z. G.
Frenkel', Act Mem, Acad Med Sci USSR

"Gig 1 San" No 6, pp 52-55

Outlines important works presented and meetings
held. In the future socialistic competition bet-
ween the different sections of the Society should
be set up, as well as competition between the
Moscow, Leningrad, and Kiev branches of the
Society.

170T65

FRENKEL, Z.G.
FRENKEL', Z.G.

S.A. Novosel'skii, an outstanding worker of Soviet sanitary statistics.
Gig. 1 san. 22 no.12:48-51 D '57 (MIRA 11:3)

1. Deystvitel'nyy chlen AMN SSSR.

(BIOGRAPHIES

Novoselsky, S.A. (Rus)

(SANITATION

in Russia, contribution of S.A. Novoselsky (Rus)

FRANKEL', Z.G., prof.; BEN, Ye.E., prof.; SOBOLEVA, T.S., dotsent (Leningrad)

Toward a fifth revision of the Soviet nomenclature of diseases. Vrach.
delo no.5:521 My '59. (MIRA 12:12)

1. Daystvitel'nyy ohlen AMN SSSR (for Frankel').
(NOSOLOGY)

FRENKEL', Z.G., prof.; MALIYENKO-PODVYSOTSKIY, A.G., kand. tekhn. nauk;
KHODASEVICH, B.G., kand. sel'skokhoz. nauk

Concerning the article entitled "Objectives in safeguarding the sanitation of natural waters during the new phase in the development of the chemical industries" by Professor S.N. Cherkinskii, corresponding member of the Academy of Medical Sciences of the U.S.S.R. Gig. i san. 24 no.5:62-63 My '59. (MIRA 12:7)

(INDUSTRIAL WASTES) (SEWAGE IRRIGATION)
(CHERKINSKII, S.N.)

FRENKEL', Z.G.

"Public health and demographic statistics for foreign countries."
Reviewed by Z.G. Frenkel'. Gig.1 san. 25 no.7:115 J1 '60.
(MIRA 14:5)

(PUBLIC HEALTH—STATISTICS)

FRENKEL', Z.G., prof.

Problem of medical expertise on work capacity and work arrangement
for old age groups in connection with the lengthening of life-
span. Trudy LIETIN no.4:5-10 '60. (MIRA 16:2)

1. Deystvitel'nyy vlieniye AMN SSSR.
(GERIATRICS) (ABILITY, INFLUENCE OF AGE ON)

FRENKEL', Z.G., prof. (Leningrad)

Problem of the useful employment of time by hospital patients;
from a patient's notes. Sov. zdrav. 19 no.9:21-23 '60.
(MIRA 13:11)

(HOSPITAL PATIENTS)

FRENKEL', Z.G., prof.; SOBOLEVA, T.S., dotsent

"Statistical Yearbook of the German Democratic Republic, 1959".
Reviewed by Z.G.Frenkel', T.S.Soboleva. Gig. i san. no.5:116-118
My '61. (MIRA 15:4)

1. Deystvitel'nyy chlen AMN SSSR (for Frenkel').
(GERMANY, EAST---YEARBOOKS)

FRENKEL', Z.G.; SOBOLEVA, T.S., dotsent (Leningrad)

Population of Finland as revealed by data on hygiene and demography.
Sov. zdrav. 20 no.8:91-96 '61. (MIRA 15:1)

1. Deystvitel'nyy ohlen AMN SSSR (for Frenkel').
(FINLAND_VITAL STATISTICS)

FRENKEL', Z.G., prof.

"Concise statistical yearbook of the Polish People's Republic."

Reviewed by Z.G.Frenkel', Gig. 1 san. 26 no.2:116 F '61.

(MIRA 14:10)

1. Deystvitel'nyy chlen AMN SSSR.

(POLAND--YEARBOOKS)

FRENKEL', Z.G., prof.; SOBOLEVA, T.S., dotsent

"Statistical Yearbook of the People's Republic of Bulgaria, 1959."
Reviewed by Z.G.Frenkel', T.S.Soboleva. Gig. 1 san. 26 no.5:118-120
My '61. (MIRA 15:4)

1. Deystvitel'nyy ohlen AMN SSSR (for Frenkel');
(BULGARIA--YEARBOOKS)

FRENKEL', Z.^GF., prof.; SOBOLEVA, T.S., dotsent

"Statistical Yearbook of the Czechoslovak Republic." Reviewed by
Z.G.Frenkel', T.S.Soboleva. Gig. i san. 26 no.6;114-116 Je '61.

(MIRA 15:5)

(CZECHOSLOVAKIA---YEARBOOKS)

FRENKEL', Z.G., prof.; SOBOLEVA, T.S., dotsent

"Concise statistical collection of the Rumanian People's Republic."
Reviewed by Z.G.Frenkel', T.S.Soboleva. Gig. i san. 26 no.8:115-116
Ag '61. (MIRA 15:4)

(ROMANIA--VITAL STATISTICS)

FRENKEL', Z.G., prof.

Survey of materials on the use of sewage waters in agriculture in the German Democratic Republic published in the journal "Zeitschrift fur die gesamte Higiene und ihre Grenzgebiete," 1962. Gig. i san. 28 no.7:104-107 JI '63.
(MIRA 17:1)

1. Deystvitel'nyy chlen AMN SSSR.

FRENKEL', Z.G., prof. zasluzhennyy deyatel' nauki

Fundamental regularities of demographic processes in the
present epoch. Trudy LIETIN no.16:11-90 '64.

(MIRA 19:1)

1. Deystvitel'nyy chlen AMN SSSR.

L 24170-66

ACC NR: AP6015183

SOURCE CODE: UR/0240/65/COO/002/0121/0122

REVIEWER: Frankel, Z.G. (Professor; Active member AMN SSSR); Soboleva, T.S. (Docent)

ORG: none

TITLE: Review of book by B. Ts. Uralis entitled 'Birth Rate and Life Expectancy in the USSR' (Rozhdayemost' i prodolzhitel'nost' zhizni v SSSR), TsSU SSSR, Moscow, 1963, 136 pages

SOURCE: Gigiyena i sanitariya, no. 2, 1965, 121-122

TOPIC TAGS: social problem, anthropology

ABSTRACT: In the preface of the book, the author discusses the socialist law of population, as distinguished from the law of population under capitalism. And indeed, in the socialist transformation of society, especially in the initial period, the mortality index does drop faster than the birth rate. But with the more active participation of women in the work of society the birth rate will not increase but should drop from 35-45 to 17-22 per 1000. And with the rise in average life expectancy and increase in the size of older age groups the mortality rate will rise to 9-12 or even 14 per 1000. The national population increase will not therefore rise but will fall, as has occurred in Czechoslovakia and other socialist countries. The reviewers list a number of less important factual errors and errors in interpretation.

UDC: 312.1+312.287(470)

Card 1/2

L 24170-66

ACC NR: AP6015183

tation made by the author, and they notesubstantial shortcomings in the presentation of statistics and graphs. Finally, they criticize his assertion that in the USSR the addition of years of life expectancy has been uniform for all age groups. This assertion contradicts both the complete mortality table of the Central Statistical Bureau for 1958-1959 and the Marxist-Leninist doctrine that death is an essential element of life. /JIRS/

SUB CODE: 05 / SUBM DATE: none

Card

2/2

FRENKEL', I.L., inzhener.

Damage to 6-10 kv transformers model TPF. Rab.energ. 3 no.5:20 My '53.
(MLRA 6:5)
(Electric transformer)

FRENKEL', Z.L., inzh.; LIKHTOROVICH, F.F., tekhnik

Conventional units for determining the classes of electric networks.

Elek.sta. 28 no.12:82-83 D '57.

(MIRA 12:3)

(Electric networks)

Frankian, Aram

✓ Frankian, Aram. Etudes de mathématiques suméro-
akkadiennes, égyptiennes et grecques. Rev. Univ.
"C. I. Parhon" Bucarest Ser. Sci. Mat.
2 (1953), no. 3, 7-20. (Romanian, Russian and
French summaries.)

Edna Heath

Frankian, Aram: Studies of Sumer-Akkadian, Egyptian and Greek Mathematics

onw 6/24

PRENKIAN, A.

Studies of Sumero-Akkadian, Egyptian, and Greek mathematics. I. In French.

P. 17 (REVISTA DE CHIMIE) (Bucuresti, Rumania) Vol. 1, no. 1. 1957

50: Monthly Index of East European Accessions (EEAI) IC Vol. 7, No. 5 1958

KOWALCZYK, Hanna; FRENKIEL, Stanislaw; HARAZDA, Maria

Effect of chemotherapy on morphological and bacteriological pulmonary changes in resected pulmonary tissues. Gruzlica 30 no.4:341-348 '62.

1. Z Kliniki Chirurgii Klatki Piersiowej Studium Doskonalenia Lekarzy w Zakopanem Kierownik: prof. dr med. W. Rzepecki.

(TUBERCULOSIS PULMONARY pathol)
(ANTITUBERCULAR AGENTS ther)

KUKIN, V.D.; FRENKIN, A.R.

Approximate equations for the scattering of pions on nucleons.
Nauch. dokl. vys. shkoly; fiz.-mat. nauki no.1:71-79 '58.
(MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Mesons--Scattering) (Nucleons)

21(1),24(7)

AUTHORS: Kukin, V.D., Solov'yev, L.D., and Frenkin, A.R. SOV/155-58-3-31/37

TITLE: Approximate Equations for Virtual Photoproduction (Priblizhennyye uravneniya dlya virtual'nogo fotorozhdeniya)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 169-177 (USSR)

ABSTRACT: In the paper of Logunov and Solov'yev [Ref 1] the dispersion of an electron at a nucleon with the production of a π -meson ($N+e \rightarrow N+e+\pi$) is considered. In the lowest approximation (with respect to e) it concerns the emission of a virtual photon the interaction of which with the nucleon leads to the production of the meson. In [Ref 1] this kind of interaction is denoted as a virtual photoproduction. Dispersion relations for the amplitude of the process are obtained in [Ref 1]. In the present paper, by phase investigations the authors obtain approximate equations from these relations. At first the dispersion relations in the system of the center of mass are written. Here especially the region of small energies and the S- and P-meson waves are considered ($m \rightarrow 0$ in the dispersion relations). The restriction to finitely many waves permits (as in the case of real photoproduction) partially to overcome the difficulties combined with

Card 1/2

Approximate Equations for Virtual Photoproduction

SOV/155-58-3-31/37

the non-observable region $\cos \theta < -1$. In the obtained equations for S- and P-waves there appear additional terms (in comparison with the analogous equations for real photoproduction) which make allowance for the considered meson production. Finally it is shown that the amplitude of the virtual photoproduction is combined with the phases of the meson-nucleon-dispersion just so as the amplitude of the real photoproduction. The authors thank A.A.Logunov.

There are 5 references, 2 of which are Soviet, and 3 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova
(Moscow State University imeni M.V.Lomonosov)

SUBMITTED: April 1, 1958

Card 2/2

FRENKIN A. R.
LOGUNOV, A. A. and FRENKIN, A. R.

"On the Dispersion Relations for the Compton Effect." Nuclear Physics, Vol. 7,
No. 6, p. 573--578 (No. Holland Publ. Co.) 1958.

Abstract: A basis underlying the deduction of the dispersion relations for the
Compton Effect on nucleons in the absence of an unobservable energy
region is presented.

Joint Inst. of Nuclear Research, Laboratory of Theoretical Physics, Dubna, USSR.

KUKIN, V.D.; FRENKIN, A.R.

Spurious states and the crossing symmetry condition. Dokl.
AN SSSR 133 no.1:49-51 J1 '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.
Lomonosova. Predstavleno akademikom N.N.Bogolyubovym.
(Particles (Nuclear physics))
(Mathematical physics)

KUKIN, V.D.; FRENKIN, A.R.

Construction of the scattering matrix in nonlocal theories.
Dokl. AN SSSR 139 no.5:1089-1092 Aug '61. (MIRA 14:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom N.N. Bogolyubovym.
(Matrices) (Scattering (Physics)) (Operators (Mathematics))

41575
9/020/62/146/004/007/015
B104/B102

24.44.10

AUTHOR: Frenkin, A. R.

TITLE: Green's functions in the theory of the strong couplings

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 4, 1962, 805 - 807

TEXT: Study of the strong interaction occurring between a point nucleon and a charged-meson field reveals a logarithmic divergence of the renormalized coupling constants. It is suspected that this divergence is related to a rotational degeneracy of the system in the isotopic space. This charge degeneracy could be removed by a proper choice of the Hamiltonian. Proceeding from the Hamiltonian

$$\mathcal{H} = \sum_{(k)} \omega_k (b_{k+}^\dagger b_{k+} + b_{k-}^\dagger b_{k-}) - g(Q\tau + \tau^\dagger Q^\dagger) + v(Q - Q^\dagger)^2, \quad (1)$$

$$Q = \sum_{(k)} \frac{\lambda_k}{\sqrt{2\omega_k}} (b_{k+} + b_{k-}^\dagger); \quad Q^\dagger = \sum_{(k)} \frac{\lambda_k}{\sqrt{2\omega_k}} (b_{k-} + b_{k+}^\dagger); \quad (2)$$

of a system of charged mesons interacting with an infinitely heavy nucleon, the rotational degeneracy can be removed because the total charge

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Green's functions in the theory ...

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$$\left\| q = \tau\tau^+ + \sum_{(k)} b_{k+}^+ b_{k+} - \sum_{(k)} b_{k-}^+ b_{k-} \right\| \quad (3)$$

of the system is expressible by an integral of motion and by adding $\sqrt{(Q - Q^+)^2}$ to the usual Hamiltonian: if $\nu \neq 0$, the Hamiltonian (1) is not invariant under the simultaneous substitution

$$\left\{ \begin{array}{l} b_{k+} \rightarrow e^{i\nu} b_{k+}; \quad b_{k-} \rightarrow e^{-i\nu} b_{k-}; \quad \tau \rightarrow \tau e^{-i\nu}; \\ b_{k+}^+ \rightarrow e^{-i\nu} b_{k+}^+; \quad b_{k-}^+ \rightarrow e^{i\nu} b_{k-}^+; \quad \tau^+ \rightarrow \tau^+ e^{i\nu}. \end{array} \right. \quad (4).$$

Thus, a finite renormalized meson charge is obtained for a point meson. The energy representation, according to N. N. Bogolyubov and S. V. Tyablikov (DAN, 126, 53 (1959)), gives:

$$E \langle \langle \tau | \tau^+ \rangle \rangle = \frac{\langle \sigma \rangle}{2\pi} - g \langle \langle \sigma Q^+ | \tau^+ \rangle \rangle; \quad (5).$$

$$E \langle \langle \tau^+ | \tau \rangle \rangle = g \langle \langle \sigma Q | \tau \rangle \rangle;$$

$$E \langle \langle \sigma | \tau^+ \rangle \rangle = -\frac{\langle \tau^+ \rangle}{\pi} - 2g \langle \langle \tau Q | \tau^+ \rangle \rangle + 2g \langle \langle \tau^+ Q^+ | \tau \rangle \rangle.$$

Allowing for the fact that in main approximation $\langle \tau \rangle = \langle \tau^+ \rangle$ and $\langle \sigma \rangle = 0$,
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Wick's theorem leads to

$$\begin{aligned} E \langle \langle \tau | \tau^+ \rangle \rangle &= -g \langle Q^+ \rangle \langle \langle \sigma | \tau^+ \rangle \rangle; \\ E \langle \langle \tau^+ | \tau^+ \rangle \rangle &= g \langle Q \rangle \langle \langle \sigma | \tau^+ \rangle \rangle; \\ E \langle \langle \sigma | \tau^+ \rangle \rangle &= -\frac{\langle \tau \rangle}{\pi} - 2g \langle \tau \rangle \langle \langle Q | \tau^+ \rangle \rangle - 2g \langle \dot{Q} \rangle \langle \langle \tau | \tau^+ \rangle \rangle + \\ &\quad + 2g \langle \tau \rangle \langle \langle Q^+ | \tau^+ \rangle \rangle + 2g \langle Q^+ \rangle \langle \langle \tau^+ | \tau^+ \rangle \rangle. \end{aligned} \quad (6).$$

The mean values $\langle Q \rangle$ and $\langle Q^+ \rangle$ are determined from the equation of motion for meson operators, and the mixed Green functions are represented as below by the Green nucleon functions

$$\langle \langle Q | \tau^+ \rangle \rangle = \frac{gJ(E)}{1-4vJ(E)} ((1-2vJ(E)) \langle \langle \tau^+ | \tau^+ \rangle \rangle - 2vJ(E) \langle \langle \tau | \tau^+ \rangle \rangle); \quad (9)$$

$$\langle \langle Q^+ | \tau^+ \rangle \rangle = \frac{gJ(E)}{1-4vJ(E)} (-2vJ(E) \langle \langle \tau^+ | \tau^+ \rangle \rangle + (1-2vJ(E)) \langle \langle \tau | \tau^+ \rangle \rangle); \quad (10).$$

где

$$J(E) = \sum_{(h)} \frac{\lambda_h^2}{\omega_h^2 - E^2}.$$

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Green's functions in the theory ...

Hence (6) gives

$$\langle\langle\tau|\tau'\rangle\rangle = \frac{1}{\pi} \frac{g^{1/2} \langle\tau\rangle}{E^2 - \frac{4g^4 \langle\tau\rangle^{1/2}}{1-4vJ(E)} \Delta(E)}; \quad (11)$$

$$\langle\langle\tau^*|\tau'\rangle\rangle = -\langle\langle\tau|\tau'\rangle\rangle;$$

$$\langle\langle\sigma|\tau'\rangle\rangle = -\frac{E}{\pi} \frac{\langle\tau\rangle}{E^2 - \frac{4g^4 \langle\tau\rangle^{1/2}}{1-4vJ(E)} \Delta(E)}; \quad (12)$$

$$\Delta(E) = 1 - 4\left(v + \frac{1}{4I}\right)J(E).$$

With the aid of the perturbation theory it is shown that in zeroth approximation with respect to powers of g^{-1} the Hamiltonian

$$\mathcal{H}^0 = \sum_{(k)} \omega_k (b_k^+ b_k + b_k^- b_k^-) + \left(v + \frac{1}{4I}\right)(Q - Q^*)^2 \quad (16)$$

can be diagonalized and that all eigenvalues are $E_\mu^0 \neq 0$. Hence all three Green functions (11) have no poles if $E = 0$, which means that the system investigated contains no degeneracies.

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Green's functions in the theory ...

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ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 3, 1962, by N. N. Bogolyubov, Academician

SUBMITTED: April 28, 1962

Card 5/5

41673

S/020/62/146/005/007/011
B125/B186

24 445

AUTHORS: Kukin, V. D., Frenkin, A. R.

TITLE: A model in quantum field theory

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 5, 1962, 1054-1057

TEXT: The critical value of the coupling constant for the occurrence of "phantom conditions" is shown to be $g_{\text{crit}} = .1/I(M) > 0$. Systems with the Hamiltonian

$$\mathcal{H} = \sum_{(k)} \omega_k (b_k^\dagger b_k + \bar{b}_k^\dagger \bar{b}_k) + \sum_{(k)} (E_k - \delta M) a_k^\dagger a_k +$$

$$+ g_0 \sum_{(k, p)} \sqrt{\frac{M}{E_{k+p}}} \frac{1}{\sqrt{4\omega_k \omega_p}} (a_{k+p}^\dagger b_k \bar{b}_p + b_k^\dagger \bar{b}_p^\dagger a_{k+p}) + \quad (1),$$

$$+ \lambda_0 \sum_{(k, p, q)} \frac{1}{\sqrt{16\omega_k \omega_p \omega_q \omega_{k+p-q}}} b_k^\dagger \bar{b}_p^\dagger b_q \bar{b}_{k+p-q}. \quad (2)$$

$$E_k = \sqrt{k^2 + M^2}, \quad \omega_k = \sqrt{k^2 + \mu^2}, \quad M < 2\mu.$$

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A model in quantum field theory

show no cross symmetry either in the terms proportional to g_0 or in the λ_0 terms. $a_{\vec{k}}^+$, $b_{\vec{k}}^+$, and $\bar{b}_{\vec{k}}^+$ are the production operators, $a_{\vec{k}}$, $b_{\vec{k}}$, and $\bar{b}_{\vec{k}}$ are the annihilation operators of the particles of types a, b, and \bar{b} with the momentum \vec{k} . M and δM are the observable mass and the renormalization of the mass of the a-particle, μ is the observable mass of the b- and \bar{b} -particles. The operators N_1 and N_2 ,

$$N_1 = \sum_{(\mathbf{k})} a_{\mathbf{k}}^+ a_{\mathbf{k}} + \sum_{(\mathbf{k})} b_{\mathbf{k}}^+ b_{\mathbf{k}} \quad (3)$$

$$N_2 = \sum_{(\mathbf{k})} a_{\mathbf{k}}^+ a_{\mathbf{k}} + \sum_{(\mathbf{k})} \bar{b}_{\mathbf{k}}^+ \bar{b}_{\mathbf{k}}$$

are constants of motion. The scattering amplitude

$$T(E) = \frac{\frac{g^2}{E-M} + \lambda}{1 + (E-M) \sum_{(\mathbf{k})} \frac{1}{(2\omega_{\mathbf{k}})^2} \frac{1}{(2\omega_{\mathbf{k}}-M)(2\omega_{\mathbf{k}}-E)} \left[\frac{g^2}{2\omega_{\mathbf{k}}-M} + \lambda \right]} \quad (16)$$

with $B = 1 - g^2 I(\dots)$, the mass renormalization $\delta M = -g_0 L(M)/(1+\lambda_0 L(M))$, and

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A model in quantum field theory.

the renormalized charges $1/g^2 = (\Lambda^2/g_0^2) + I(M)$ and $\lambda = B\lambda_0/\Lambda$ are found for the sector $N_1 = 1, N_2 = 1$. For $E \rightarrow -\infty$, $T(E)$ goes to the finite limit λ_0 . The point $E_0 = M - (g^2/\lambda)$ corresponds to the bare mass of the α -particle. The disappearance of the charges g and λ corresponds to the double disturbance of the cross symmetry. The Hamiltonian (1) with $\lambda_0 = 0$ (Lee model of bosons) gives the scattering amplitude

$$T(E) = \frac{g_0^2}{E - M + \delta M + g_0^2 L(E)} \quad (18).$$

The logarithmic divergence of this scattering amplitude is compensated by a proper choice of the mass renormalization. The scattering amplitude expressed by the renormalized charge,

$$T(E) = \frac{g^2}{(E - M) \left\{ 1 + g^2 (E - M) \sum_{(k)} \frac{1}{(2\omega_k)^2} \frac{1}{((2\omega_k - M)^2 (2\omega_k - E))} \right\}} \quad (22),$$

determines the phase of the S-wave for any g^2 . The present model differs

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A model in quantum field theory.

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essentially from the Lee model with a fixed source.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 28, 1962, by N. N. Bogolyubov, Academician

SUBMITTED: May 23, 1962

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8/020/63/148/003/014/029
B102/B186

AUTHOR: Frenkin, A. R.

TITLE: Determination of the isobaric state in models with a fixed nucleon

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1060 - 1063

TEXT: The isobaric state of a system containing a fixed nucleon which interacts strongly with charged mesons is investigated. The system is described by the Hamiltonian

$$\mathcal{H} = \sum_{(k)} \omega_k (b_{k+}^\dagger b_{k+} + b_{k-}^\dagger b_{k-}) - g(Q\tau + \tau^\dagger Q^\dagger), \quad (1)$$

$$Q = \sum_{(k)} u_k (b_{k+} + b_{k-}^\dagger), \quad Q^\dagger = \sum_{(k)} u_k (b_{k-} + b_{k+}^\dagger), \quad u_k = \frac{\lambda_k}{\sqrt{2\omega_k}} \quad (2)$$

where τ, τ^\dagger are the nucleon-charge production and annihilation operators; $b_{k+}^\dagger (b_{k+})$ and $b_{k-}^\dagger (b_{k-})$ are the production (annihilation) operators of positive and negative mesons of momentum k ; $\lambda_k = \lambda_k^* = \lambda(k^2)$ is the nucleon form factor, $\lambda_k \rightarrow 0$ for $k^2 \rightarrow \infty$; the coupling constant $g \gg 1$ and $\tau\tau^\dagger + \tau^\dagger\tau = 1$. The Hamiltonian (1) (cf. for example. H. Ninkle, R. Serber, Phys. Rev. 119, 449, Card 1/4.

Determination of the isobaric ...

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$$1960) \text{ is rewritten as } \mathcal{H} = \sum_{(k)} \omega_k b_{k+}^\dagger b_{k+} + \sum_{(k)} \omega_k b_{k-}^\dagger b_{k-} - g(Q\tau + \tau^\dagger Q^\dagger) + Q(q - \tau\tau^\dagger), \quad (3),$$

$$\text{charge conservation being described by } q = \sum_{(k)} \langle b_{k+}^\dagger b_{k+} \rangle - \sum_{(k)} \langle b_{k-}^\dagger b_{k-} \rangle + \langle \tau\tau^\dagger \rangle. \quad (4).$$

From the Heisenberg kinetic equations of the operators the following equalities are obtained for the boson and fermion operators:

$$\begin{aligned} \langle b_{k+} \rangle &= \frac{g u_k}{\omega_{k+}} \langle \tau^\dagger \rangle, & \langle b_{k-} \rangle &= \frac{g u_k}{\omega_{k-}} \langle \tau \rangle, \\ \langle b_{k+}^\dagger \rangle &= \frac{g u_k}{\omega_{k+}} \langle \tau \rangle, & \langle b_{k-}^\dagger \rangle &= \frac{g u_k}{\omega_{k-}} \langle \tau^\dagger \rangle. \end{aligned} \quad (5).$$

$$\text{If, therefore, the new operators } \begin{aligned} b_{k+} &= \langle b_{k+} \rangle + a_{k+}, & b_{k-} &= \langle b_{k-} \rangle + a_{k-}, \\ b_{k+}^\dagger &= \langle b_{k+}^\dagger \rangle + a_{k+}^\dagger, & b_{k-}^\dagger &= \langle b_{k-}^\dagger \rangle + a_{k-}^\dagger, \end{aligned} \quad (6) \text{ with}$$

$$\langle a_{k+} \rangle = \langle a_{k-} \rangle = \langle a_{k+}^\dagger \rangle = \langle a_{k-}^\dagger \rangle = 0, \quad (7) \text{ are introduced, the component } \mathcal{H}_0 \text{ of the}$$

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Determination of the isobaric ...

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Hamiltonian $\mathcal{H} = \mathcal{H}_0 + \mathcal{H}_1$ can be written in terms of $I(\Omega) = \sum_{(\vec{k})} \lambda_k^2 / (\omega_k^2 - \Omega^2)$.

This main component characterizes the energy of the system:

$E_0 = \langle \mathcal{H}_0 \rangle = -g^2 I(\Omega) \langle \tau \rangle \langle \tau^+ \rangle + \Omega(q - \langle \tau \tau^+ \rangle)$. (10). In the same approximation one has $q = 2g^2 \langle \tau \rangle \langle \tau^+ \rangle F(\Omega) \Omega + \langle \tau \tau^+ \rangle$ where $F(\Omega) = \sum_{(\vec{k})} \lambda_k^2 / (\omega_k^2 - \Omega^2)^2$. If the

fermion operators in the expressions for E_0 and q are determined in perturbation-theoretical approximation, one obtains

$E_0 = -g_r^2 I(\Omega) + \Omega(q - 1/2)$, $q = 2g_r^2 F(\Omega) \Omega + 1/2$. (20), where $g_r = g \langle \tau \rangle$ and $\langle \tau \tau^+ \rangle = 1/2$. Eliminating I ,

$$E_0(q) = -g_r^2 I(0) + \frac{g_r^2 \mu}{4\pi} \left(\sqrt{1 - \left[\frac{4\pi(q - 1/2)}{g_r^2} \right]^2} - 1 \right) \quad (21)$$

is obtained; μ denotes the meson mass. If $E_0(q)$ is expanded, one has

$$E_0(q) = -g_r^2 I(0) + \frac{2\pi\mu}{g_r^2} \left(q - \frac{1}{2} \right)^2 \quad (22)$$

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Determination of the isobaric ...

factor $\lambda_k \neq 1$ one has $E_0(q) = -g_F^2 I(0) + (q-1/2)^2 / 4g_F^2 F(0)$. The isobaric energy $\Delta E_q = E_0(q) - E_0(1/2)$ is obtained as $\Delta E_q = J\Omega^2/2$, where $J = 2g_F^2 F(0)$ is the isotopic moment of inertia.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University im. M. V. Lomonosov)

PRESENTED: August 29, 1962 by N. N. Bogolyubov, Academician

SUBMITTED: August 6, 1962

Card 4/4

FRENKIN, B.M., inzh.

Design of electric home appliances. Vest.elektroprom. 31
no.1:13-15 Ja '60. (MIRA 13:5)
(Household appliances, Electric)

S/062/60/000/008/011/012
B004/B054

AUTHORS: Frankin, E. I., Prokhorova, A. A., Paushkin, Ya. M., and
Topchiyev, A. V.

TITLE: Production of Dibromo-phenyl Boron by Direct Synthesis

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 8, pp. 1507-1508

TEXT: The authors conducted the synthesis according to the following equation:




Out of a Balandin burette, benzene and bromine in a purified nitrogen current were led into a quartz tube (length 600 mm, diameter 22 mm) which was filled with 75% of powdered boron and 25% of nickel on kieselguhr. The reaction temperature was 500 - 520°C. The reaction products were collected in vessels cooled with dry ice. The yield in dibromo-phenyl boron was 21%. Due to side reactions, also BBr₃, C₆H₅Br, C₆H₄Br₂, and traces of bromo-diphenyl boron were found. Dibromo-phenyl boron is a colorless liquid

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Production of Dibromo-phenyl Boron by Direct
Synthesis

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B004/B054

fuming in air; boiling point 89-91°C at 14 torr, melting point 32-34°C. Analysis and physical data of the reaction products are listed in a table. There are 1 table and 2 non-Soviet references.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute of Petroleum-chemical Synthesis of the Academy
of Sciences, USSR) 

SUBMITTED: January 5, 1960

Card 2/2

TOPCHIEV, A.V., akademik; PAUSHKIN, Ya.M.; PROKHOROVA, A.A.; PRENKIN,
E.I.; KURASHEV, M.V.

Studies in the field of boron compounds. New derivatives of
triallylborane. Dokl.AN SSSR 134 no.2:364-367 S '60.
(MIRA 13:9)

1. Institut neftekhimicheskogo sinteza Akademii nauk SSSR.
(Boron compounds)

FRENKIN, E.I.; PRILKHOROVA, A.A.; PAUSHKIN, Ya.M.; TOPCHIEV, A.V.

Preparation of phenylboron dibromide by direct synthesis. Izv.
AN SSSR Otd.khim.nauk no.8:1507-1508 Ag '60. (MIRA 15:5)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Boron organic compounds)

FRENKIN, M.M.; FINEVICH, G.V., nauchn. red.

[Special purpose refrigerating machinery and air conditioning plants and systems for their regulation]
Kholodil'nye mashiny i ustanovki konditsionirovaniia
vozdukha spetsial'nogo naznachenia i sistemy ikh regulirovaniia. Moskva, TSentr. nauchno-issl. in-t patentnoi informatsii i tekhniko-ekonomicheskikh issl. 1964. 26
26 p. (MIRA 18:5)

FRENKIN, M.S.

Mobility of motor vehicles on a broken terrain. Avt.prom. 28
no.4:44- 3 of cover Ap '62. (MIRA 15:4)
(Motor vehicles--Dynamics)

1. VOLKOV, G.; FRENKIN, V.
2. USSR (600)
4. Cotton Machinery
7. How to use cotton-picking machinery with maximum efficiency.
Khlopkovodstvo no. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

1. FRENKIN, V., ENG.; DERBAREMDIKER, D.

2. USSR (600)

4. Cotton-Picking Machinery

7. Mechanizing the cotton harvest.
MTS 12 no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

FERSHAT, Naum Il'ich, sasluzhennyy mekhanizator Uzbekskoy SSR; FRENKIN,
Vladimir Mikhaylovich, sasluzhennyy mekhanizator Uzbekskoy SSR;
GRUSHIN, A., red.; ABBASOV, T., tekhred.

[Over-all mechanization of cotton-growing in Uzbekistan]
Kompleksnaya mekhanizatsiya khlopkovodstva v Uzbekistane.
Tashkent, Gosizdat-vo Uzbekskoi SSR, 1960. 63 p. (MIRA 14:3)
(Uzbekistan--Cotton growing) (Farm mechanization)

SOKOLOV, F.A., kand. sel'khoz. nauk; KOKUYEV, V.I., kand. sel'-
khoz. nauk; SHAFRIN, A.N., zasl.agr.Uzb.SSR; KONDRATYUK, V.P.,
kand. sel'khoz. nauk; MALINKIN, H.P., doktor sel'khoz.
nauk; YEREMENKO, V.Ye., doktor sel'khoz. nauk [deceased];
MEDNIS, M.P., kand.biol. nauk; FILIPPENKO, G.I., kand.
sel'khoz. nauk; USPENSKIY, F.M., kand. biol. nauk;
SOLOV'YEVA, A.I., kand. sel'khoz. nauk; PRUGALOV, A.M.,
kand.sel'khoz. nauk [deceased]; ZAKIROV, T.S., kand.
sel'khoz. nauk; FREYKIN, V.M., zasl. mekhanizator UzSSR;
GORELIK, I.M., red.; ABBASOV, T., tekhn. red.

[Cultivation practices in cotton growing] Agrotekhnika
khlopchatnika. Tashkent, Gos.izd-vo UzSSR, 1963. 326 p.
(MIRA 17:1)

(Uzbekistan--Cotton growing)

FRENKINA, D.Z.

LAVROV, V.V.; ARKHANGEL'SKAYA-LEVINA, M.S.; FEDOROV, D.N.; IOSSET, G.Ya.;
SOSNYAKOV, N.G.; BERINGER, Yu.V.; KOZACHINSKIY, R.M.; YELETSKAYA,
O.I.; GOSHKINA, A.I.; MIKLASHEVSKAYA, A.V.; ZYKOV, A.A.; LEBEDEV,
M.F.; DERGUNOVA, K.S.; RYTSK, Z.A.; FRENKINA, D.Z.; TSIVIN, S.S.

In memory of A.M. Zabludovskii. Khirurgia no. 12:74-75 D '53.
(MIRA 7:1)

(Zabludovskii, Anton Martynovich, 1880-1953)

FRENKINA, D.Z.

New antianemic drugs in the treatment of hypochromic anemias
of varied etiology. Probl.gemat. i perel.krovi 4 no.4:31-
35 Ap '59. (MIRA 12:6)

1. Iz kafedry obshchey khirurgii i Leningradskogo meditsinskogo
instituta imeni akademika I.P.Pavlova (zav. - chlen-korrespondent
AMN SSSR prof.A.N.Filatov) na baze bol'nitsy imeni K.Marksa.
(ANEMIA, HYPOCHROMIC, ther.
new drugs (Rus))

FRENKINA, I.P.

757. Frenkina, I. P., The rotation of a body of variable mass
round on immovable axis (in Russian), *Trud' Tsuk. rospk.*
radio-techn. info 1, 180-183, 1955; *Ref. Zh. Mekh.* 1956, Ref.
3693.

Lagrange's equation of the second degree is deduced for a
body of variable mass with one degree of freedom (of movement),
which can be applied to the study of the movement of the cylinder
of a threshing machine.

There are misprints and inaccuracies in the article; the con-
clusion and the equation itself [5] without additional proofs can
not be accepted as correct.

A. G. Aminov, USSR

Courtesy *Referativnyi Zhurnal*

Translation, courtesy Ministry of Supply, England

9/2

FRENKINA, L.P. (Moskva); KHARITONOVA, A.N. (Moskva)

Propagation of elastic waves in a stepped rod with concentrated masses. Inzh. zhur. 5 no.4:705-710 '65. (HTWA 18:9)

FRENKINA, R. A.

YEGOROVA, N.B.; FRENKINA, R.A.

Type grouping of dysentery bacilli and their sensitivity to
sulfanilamides and synthonycin. Zhur. mikrobiol. epid. i immun.
no.6:66 Je '54. (MLRA 7:7)

1. Iz kliniki infektsionnykh bolezney Samarkandskogo meditsinskogo
instituta im. Pavlova i 1-y infektsionnoy bol'nitsy.
(SHIGELLA PARADYSENTERIAN) (SULFANILAMIDE)
(CHLORAMPHENICOL)

USSR/Microbiology - Antibiosis and Symbiosis. Antibiotics

F-2

Abs Jour : Referat Zhurn - Biol. 25 Aug 1957, 68459

Author : Egorova, N.B., Frenkina, R.A.

Title : Typing Dysentery Bacilli and Their Sensitivity to Sulfamides and Syntomycin.

Orig Pub : Sb. Nauch. Tr. Samarkandsk. Med. In-t, 1956, 9, 66-69

Abstract : Determination of serum types of 100 dysentery strains was conducted. Analyzing the cause of frequently observed group agglutination and comparing our data with the results of Hilden's experiments, the authors come to the conclusion that the receptor apparatus of dysentery microbes did not change significantly from 1934 to 1952, and also that in the majority of strains (84%) there are several receptors in one culture. There also are the results of a study made in 1951-1952 on the sensitivity of 140 dysentery strains to sulfamides and 80 strains of the Flexner group to syntomycin.

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USSR / General Problems of Pathology. Immunity.

U

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102400.

Author : Yegorova, N. B.; Frenkina, R. A.

Inst : Not given.

Title : The Influence of Synthomycin on the Immunologic Processes in the Organism.

Orig Pub: Med. zh. Uzbekistana, 1957, No 12, 10-15.

Abstract: Rabbits, immunized by triple intravenous introduction of vaccine containing the antigens of byphoid fever, paratyphoid fever B, Flexner's dysentery and Sonne dysentery, received synthomycin (I), 50 mg/kg each, in the course of 10 days. Differences in the antibody titer (AT) and activity of phagocytosis in experimental (3) and control rabbits (3) were not noted even after revaccination and increase of the I dose to 150 mg/kg. Probably, the

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USSR / General Problems of Pathology

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413620012-2"

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102400;

Abstract: inhibition of antibody formation under the influence of I noted by some authors', may be explained by the weakening of antigenic properties of microorganisms.

Card 2/2

FRENKINA, R.A.

Bacteriological diagnosis of dysentery by Rapport's dish method.
Lab.delo 4 no.6:39-41 N-D '58 (MIRA 11:12)

1. Iz laboratorii klinicheskoy infektsionnoy bol'nitsy Samarkanda .
(SHIGELLA PARADYSENTERIAE)

YEGOROVA, N.B.; MIENKINA, R.A.

Sensitivity of dysentery and typhoid-paratyphoid pathogens
to some antibiotics and their combinations. Zhur.mikrobiol.
epid. i immun. 30 no.5:143-144 My '59. (MIRA 12:9)

1. Iz Samarkandskogo meditsinskogo instituta.
(ANTIBIOTICS) (BACTERIA, EFFECT OF DRUGS ON)

L 14479-66 EWT(1)/EWT(m)/T IJP(c) WW/JW/JID/WE/GS

ACC NR: AT6004586

SOURCE CODE: UR/0000/65/000/000/0106/0111

AUTHOR: Alekseyev, A. M.; Kantorovich, B. V. (Doctor of technical sciences; Professor); Colovina, G. S.; Ivanov, V. M.; Pitin, R. N.; Ponnik, Yu. A.; Frenkina, Z. I.; Cheredkova, K. I.

ORG: none

TITLE: Study of the effect of a magnetic field on a stream of burning fuel

SOURCE: AN SSSR. Institut goryuchikh iskopayemykh. Novyye metody szhiganiya topliv i voprosy teorii goreniya (New methods in the combustion of fuels and problems in the theory of combustion). Moscow, Izd-vo Nauka, 1965, 106-111.

TOPIC TAGS: combustion, propulsion, magnetic field, gas combustion

ABSTRACT: It has been previously shown that the shape of a flame can be substantially changed and the burning velocity can be increased by the application of a magnetic field. Therefore, the use of a magnetic field to intensify combustion processes is considered in the present study, by determining the effect of a magnetic field on a burning CH₄-oxygen jet issuing from a combustion chamber through a 19.5 x 9.4 mm nozzle into air. Two cooled poles of a magnet 120 mm long were placed 15 mm from the nozzle outlet to generate a magnetic induction of 16 kgs in the 10-mm-wide gap through which the jet passed. The velocity of the gas jet was close to sonic. Measurements were made of the velocity, the flame temperature, and concentrations along the axis in the presence and absence of the magnetic field. The results

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L 14479-66

ACC NR: AT6004586

showed that due to the magnetic field the flame temperature increased by 100—200C, the velocity decreased, and the dilution with ambient air decreased. These changes are attributed to the partial conversion of kinetic into thermal energy caused by the magnetic field. Orig. art. has: 5 figures. [PV]

SUB CODE: 21/ SUBM DATE: 09Sep65/ ORIG REF: 002/ ATD PRESS: 4/94

Card 2/2

S/137/62/000/001/020/237
A060/A101

AUTHORS: Rossovskiy, S. N., Frenkina, Ts. B., Girdasova, Z. M.

TITLE: Testing of carbonatite pyrochlore ores for their ability to be concentrated

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 8, abstract 1060
("Tr. Tsentr. n.-i. gornorazved. in-ta", 1960, no. 39, 35-37)

TEXT: The principal useful component in the samples is Nb, concentrated in the pyrochlore. The Nb_2O_5 concentration is equal to 0.1%. The grain size of the pyrochlore is 0.5 - 0.003 mm. As a method for primary concentrating it is recommended to use roasting of the original ore with subsequent quenching it in water and washing off the finely dispersed slimes of $Ca(OH)_2$ and $Mg(OH)_2$ thus formed. The sandy portion remaining after this processing represents a product enriched in Nb_2O_5 and P_2O_5 , which may be subjected to further concentration on a concentrating table by magnetic separation or by flotation, depending on the assay. ✓

A. Shmeleva

[Abstracter's note: Complete translation]

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S/137/62/000/005/023/150
A006/A101

AUTHORS: Rossovskiy, S. N., Frenkina, Ts. B., Girdasova, Z. M.

TITLE: Concentration of carbonatite pyrochlorous ores

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 8-9, abstract 5049
("Sb. materialov po gorn. delu, obogashcheniyu i metallurgii. Tsentr.
n.-i. gornorazved. in-t", 1961, no. 6, 49-54)

TEXT: The basic effective component is Nb, concentrated in pyrochlore. The content of Nb_2O_5 in the initial ore is 0.1%, dissemination is 0.5 - 0.003 mm, basically 0.01 - 0.003 mm. The gravitation methods of concentrating this material did not yield positive results; flotation is made difficult by the presence of great amounts of carbonate and apatite, which are more flotation-active in an alkaline medium than pyrochlore. Reverse flotation is poorly effective. Ore roasting with subsequent extinction in water and washing of lime slurries is an effective operation of initial concentration and makes it possible to obtain sand products with a content and extraction of Nb_2O_5 which are for sample 1 and 2 (in %) 0.48 and 85.4, and 0.74 and 88.5 respectively of the initial ore. Sands of sample no. 2 were subjected to concentration on a table

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Concentration of carbonatite pyrochlorous ores

S/137/62/000/005/023/150
A006/A101 .

and magnetic separation; subsequently the non-magnetic fraction was flotated with Na oleate. As a result crude concentrate was obtained, containing 5.19% Nb_2O_5 at 50.7% extraction from the ore. Finishing was made by acid processing of the crude concentrate; subsequently pyrochloric acids were obtained with conditional Nb_2O_5 content (37 - 53.5%).

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

S/846/62/019/000/007/008
EO71/E151

AUTHORS: Alekseyev, A.M., Ivanov, V.M., and Frenkina, Z.I.
TITLE: Investigation of combustion of gaseous fuel with the simultaneous evaporation of sprayed water in a steam-gas generator
SOURCE: Akademiya nauk SSSR. Institut goryuchikh iskopayemykh. Trudy. v.19. 1962. Novyye metody szhiganiya topliv i voprosy teorii goreniya. 66-94

TEXT: One of the newest methods of fuel and heat utilisation in thermal power stations is the steam-gas cycle, based on the combustion of liquid or gaseous fuel and evaporation of sprayed water in the same space. This complex process allows a sharp increase in the intensity of combustion and of heat exchange and is a most economical method for the production of the working medium for steam-gas turbines of large power generating installations. The use of natural gas for this purpose was investigated on a laboratory installation in which the observation of the whole process from the introduction of the reacting substances to the outgoing of the working medium (steam-gas) was possible.

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Investigation of combustion of ...

S/846/b2/019/000/007/008
E071/E151

The apparatus and experimental procedure are described. The advantages of this application of gaseous fuel are discussed. The optimum conditions for combustion of gaseous fuel in steam-gas installations were experimentally established, namely: in a swirling stream with premixing and without any thermal stabilisation of the combustion process. It was shown that the best conditions for combustion and evaporation in a common space depend on: the temperature and the excess of combustion air, the efficiency of the mixing of the gaseous fuel and air, the pressure in the combustion chamber, the velocity of the air-gas mixture flowing from the burner, the fineness of the water spray, and the temperature of the water introduced into the stream of hot combustion products. The main conditions for production of steam-gas at a pressure of 5 atm.abs. were determined. Some applications of the principle in the chemical industry, e.g. for concentrating salt solutions, are briefly discussed. There are 16 figures and 6 tables.

Card 2/2

IVANOV, V.M.; FRENKINA, Z.I.

Aerodynamic investigations using a laboratory model simulating the
motion of gas flow in a steam and gas producer. Trudy IGI 19:104-113
'62. (MIRA 16:4)

(Gas flow)

(Gas producers)

IVANOV, V.M., kand. tekhn. nauk; ALEKSEYEV, A.M., inzh.; FRENKINA, Z.I.,
inzh.

Combustion of gaseous fuel under high pressure in the presence
of water and other inert media. Teploenergetika 11 no.3:
12-18 Mr '64. (MIRA 17:6)

1. Institut goryuchikh iskopayemykh.

L 16070-66

ACC NR: AT6004589 EWT(1)/EWT(m)/ETC(f)/EPF(n)-2/ENG(m)/EWA(d)/T/EWP(k) IJP(c)
WW/JW/QG/WE/QS SOURCE CODE: UR/0000/65/000/000/0146/0161

AUTHOR: Ivanov, V. M.; Frenkina, Z. I.

ORG: none

TITLE: Combustion processes and heat transfer in the combustion of liquid fuel
at high pressure 21, 44, 55 83
B+12

SOURCE: AN SSSR. Institut goryuchikh iskopyayemykh. Novyye metody szhiganiya
topliv i voprosy teorii goreniya (New methods in the combustion of fuels and
problems in the theory of combustion). Moscow, Izd-vo Nauka, 1965, 146-161

TOPIC TAGS: combustion, liquid fuel combustion, heat transfer

ABSTRACT: As a part of the program of comprehensive studies of combustion and
heat transfer at high pressures, an experimental investigation was made of diesel
fuel combustion/under 8 atm of air and up to 50 atm of oxygen-steam. The experi-
ments were conducted in two combustion chambers with diameters of 0.22 and 0.32
and lengths of 1.65 and 2 m. The length of the combustion zone was determined
as a function of the air excess factor and pressure. A previously derived formula
for calculating the length of the combustion zone as a function of the air excess

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